

[0027] FIG. 14a is a bottom view of a sorting head according to one embodiment of the present invention for use with the system of FIG. 1.

[0028] FIG. 14b is an enlarged view of a portion of the sorting head of FIG. 14a taken along line 14b showing an optical coin discrimination sensor according to one embodiment of the present invention.

[0029] FIG. 14c is a cross-section view of the sorting head of FIG. 14a taken along line 14c showing an optical coin discrimination sensor according to one embodiment of the present invention.

[0030] FIG. 14d is a functional block diagram of the control system for the a coin processing system shown in FIG. 1 using the sorting head of FIG. 14a. and an optical coin discrimination sensor according to one embodiment of the present invention.

[0031] FIG. 15 is a flow chart illustrating a method for processing coins with the sorting head of FIGS. 14a-c and an optical coin discrimination sensor according to one embodiment of the present invention.

[0032] While the invention is susceptible to various modifications and alternative forms, specific embodiments will be shown by way of example in the drawings and will be desired in detail herein. It should be understood, however, that the invention is not intended to be limited to the particular forms disclosed. Rather, the invention is to cover all modifications, equivalents and alternatives falling within the spirit and scope of the invention as defined by the appended claims.

#### DETAILED DESCRIPTION OF THE ILLUSTRATED EMBODIMENTS

[0033] Turning now to the drawings and referring first to FIG. 1, a disc-type coin processing system 100 according to one embodiment of the present invention is shown. The coin processing system 100 includes a hopper 110 for receiving coins of mixed denominations that feeds the coins through a central opening in an annular sorting head 112. As the coins pass through this opening, they are deposited on the top surface of a rotatable disc 114. This rotatable disc 114 is mounted for rotation on a shaft (not shown) and driven by an electric motor 116. The disc 114 typically comprises a resilient pad 118, preferably made of a resilient rubber or polymeric material, bonded to the top surface of a solid disc 120. While the solid disc 120 is often made of metal, it can also be made of a rigid polymeric material.